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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,221	02/24/2004	Jean-Christophe Henrion	238953US0	1175

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EXAMINER	
HENRY, MICHAEL C	

ART UNIT	PAPER NUMBER
1623	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/784,221	HENRION ET AL.	
	Examiner	Art Unit	
	Michael C. Henry	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07/06/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24,26,28,30 and 31* is/are rejected.

7)☒ Claim(s) *25,27 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The following office action is a responsive to the Amendment filed, 07/06/05.

The amendment filed 07/01/05 affects the application, 10/784,221 as follows:

Claims 1, 2, 24, 26, 28 have been amended. Upon further consideration, the examiner has determined that the indicated allowable subject matter of the prior office action is not appropriate on the merits and thus is withdrawn. Consequently, this instant action is made, Nonfinal.

The responsive to applicants' arguments is contained herein below.

Claims 1-31 are pending in application

Information Disclosure Statement

The information disclosure statement filed complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been placed in the application file and the information referred to therein has been considered as to the merits.

Claim Rejections - 35 USC § 103

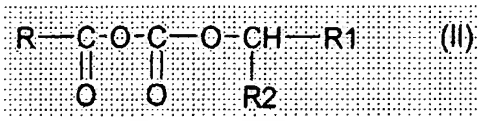
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-24, 26, 28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lalezari et al. (US 5,498,708).

In claim 1, applicant claims "A process for the preparation of an O-acylated glucose derivative, in which the O-acylated glucose derivative prepared is O-acylated at least 50% in the 6 position, comprising:

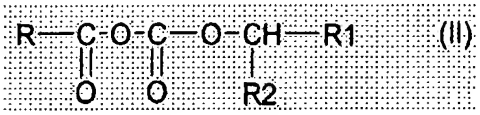
- preparing a mixed anhydride of formula (11):



in which R1 and R2 are, independently of one another, saturated or unsaturated and linear or branched hydrocarbon radicals comprising 1 to 20 carbon atoms and R is a saturated or unsaturated, linear or branched hydrocarbon chain comprising 7 to 21 carbon atoms, by reaction of a carboxylic acid of formula R-COOH with an alkyl haloformate of formula X-C(O)-O-CHR1R2, with X representing halogen; and reacting said mixed anhydride with glucose." Dependent claims 2-11, 17, 18, are drawn to the process of claim 1 involving specific acyl residues in formula (II) including myristoyl, specific alkyl haloformate, isopropyl haloformate, isopropyl chloroformate and the preparation of the mixed anhydride in organic solvent. Claims 12-16, 19-23 are drawn to the process of claim 1 involving the preparation of mixed anhydrides at specific temperature ranges, time ranges, the preparation of mixed anhydrides with glucose in organic solvent and at specific temperature ranges, time ranges. Claims 24 and 26 are drawn to said the process wherein involving the preparation of specifc O-acylated glucose derivatives. Claim 28 is drawn to a process for the preparation said O-acylated glucose derivative including the optional purification of the product and using said optionally purified product to provide a cosmetic or dermatological composition. Claims 30 and 31 are drawn to said process, wherein R is a hydrocarbon chain comprising 11 to 17 carbon atoms.

Lalezari et al. disclose a process for the preparation of an O-acylated glucose derivative, comprising:

- preparing a mixed anhydride of formula (11):



in which R1 = CH_3 when R2= H or R2 = CH_3 when R1= H,

by reaction of a carboxylic acid of formula R-COOH (myristic acid) with an alkyl haloformate (ethyl chloroformate), and reacting said mixed anhydride with glucose (see col. 5, example 10, lines 10-18, and the abstract). In addition, Lalezari et al. disclose the use of mixed anhydride with the acyl residue, myristoyl, the use of the alkyl haloformate, ethyl chloroformate, and uses organic solvent, triethylamine (see col. 5, example 10, lines 10-18, and the abstract). Furthermore, Lalezari et al. disclose that R can be hydrocarbon chain comprising 2-30 carbon atoms (see col. 2, lines 24-31). In addition, Lalezari et al. disclose that said O-acylated glucose derivatives can be used as components in cosmetic compositions (see col. 3, lines14-16). It should be noted that although Lalezari et al. disclose is silent about the use of specific temperature and reaction time, said use should not affect the formation product.

The difference between applicants' claimed method and the method of Lalezari et al. is that Lalezari et al. do not exemplify the use of an alkyl haloformate wherein the alkyl radical or group is branched (such as an isopropyl group in which R1 = R2 = CH_3) and Lalezari et al. do not disclose the % O-acylation that is in the 6 position of said derivative. However, Lalezari et al. disclose that alkyl chloroformate in which the alkyl group is from 1-10 carbons can be preferably used (see col.2, lines 59 to col. 3, line 13) and Lalezari et al. compound may well be

O-acylated at least 50% in the 6 position especially since Lalezari et al. disclose that the fully esterified polyol will be obtained if about one mole of acid is used for each esterifiable hydroxyl group and that if partial esters are to be prepared the mole ratios may be adjusted to esterify less than all the hydroxyl groups (see col. 3, lines 3-7). This implies that any alkyl chloroformate including alkyl chloroformate wherein the alkyl radical or group is branched (such as an isopropyl group in which R1 = R2 = CH_3) can be used and that Lalezari et al. compound may well be O-acylated at least 50% in the 6 position.

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to have used the process of Lalezari et al. to prepare an O-acylated glucose derivative to be used as components of cosmetic compositions, and to use any alkyl chloroformate such as isopropyl chloroformate, since Lalezari et al. disclose that alkyl chloroformate in which the alkyl group is from 1-10 carbons can be used, and to determine the amount or % of O-acylation at any position (such as at the 6 position) since Lalezari et al. disclose that the amount of O-acylation depends on the mole of acid used for each esterifiable hydroxyl group.

One having ordinary skill in the art would have been motivated, to use the process of Lalezari et al. to prepare an O-acylated glucose derivative to be used as components of cosmetic compositions, and to use any alkyl chloroformate such as isopropyl chloroformate, since Lalezari et al. disclose that alkyl chloroformate in which the alkyl group is from 1-10 carbons can be used, and to determine the amount or % of O-acylation at any position (such as at the 6 position) since Lalezari et al. disclose that the amount of O-acylation depends on the mole of acid used for each esterifiable hydroxyl group.

Allowable Subject Matter

Claims 25, 27, 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The present invention relates a process for the preparation of an O-acylated glucose derivative, comprising preparing a mixed anhydride of specific formula, by the reaction of a carboxylic acid of a specific formula with an alkyl haloformate of specific formula; and reacting said mixed anhydride with glucose. The very relevant prior art document (US 5,498,708) to this invention discloses a process for the preparing an O-acylated glucose derivative, comprising preparing a mixed anhydride, by reacting a carboxylic acid with an alkyl haloformate and reacting said mixed anhydride with glucose. However, the process drawn to claims 25, 27, and 29 of the instant invention, which are characterized by further limitations, are different and unobvious to those of the prior art. In particular, the O-acetylated glucose derivative of specific formula (I) which is O-acetylated at least 50 % in the 6 position wherein the acetylated glucose derivatives are glucose esters of vitamin F and mixtures thereof, are not disclosed or suggested in the prior art.

Response to Argument

Applicant's arguments with respect to claim 1, 3-9, 12-16, 19-23 and 30 have been considered but are not found convincing.

The applicant argues that "Lalezari does not suggest preparing an O-acylated glucose derivative in which the O-acylated glucose derivative prepared is O-acylated at least 50% in the 6 position." However, although Lalezari et al. is silent about the % O-acylation of the glucose compound at specific position this does not mean that Lalezari et al.'s compound is not O-

acylated as at least 50% in the 6 position. In fact, Lalezari et al.'s compound may well be O-acylated at least 50% in the 6 position especially since Lalezari et al. teach that the fully esterified polyol can be obtained if about one mole of acid is used for each esterifiable hydroxyl group and that partial esters can to be prepared if the mole ratios are adjusted to esterify less than all the hydroxyl groups (see col. 3, lines 3-7). Moreover, applicant's has not recited any claimed difference or alteration (s) in their process or provide any evidence of said difference or alterations that indicates that their method would produce O-acylated glucose derivatives that are at least 50% in the 6 position and consequently prevent Lalezari et al.s method from producing the same.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8:30 am to 5:00 pm; Mon-Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1235.

MCH

September 16, 2005.

SAMUEL BARTS
PRIMARY EXAMINER
GROUP 1600